

Application Number 09/938,144
Responsive to Final Office Action mailed September 11, 2006

RECEIVED
CENTRAL FAX CENTER

DEC 11 2006

REMARKS

This amendment is responsive to the Final Office Action dated September 11, 2006. Applicant has amended claims 1, 4-6, 16, 18 and 28 and cancelled claims 23 and 27. Applicant also added claims 29-31. Claims 1-6, 16-22, 24-26 and 28-31 are pending.

Claim Rejection Under 35 U.S.C. § 112

In the Final Office Action, the Examiner rejected claim 28 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant has amended claims 28 for purposes of clarification. Applicant submits that claims, as amended, particularly point out and distinctly claim the subject matter, as required by 35 U.S.C. 112, second paragraph.

Claim Rejection Under 35 U.S.C. § 102

In the Final Office Action, the Examiner rejected claims 1, 18, 19, 22, 25 and 26 under 35 U.S.C. 102(b) as being anticipated by Stefanky (US 6,226,143). The Examiner also rejected claims 16 and 17 under 35 U.S.C. 102(b) as being anticipated by Inoue (US 6,647,320) and claims 18, 20, 23 and 24 under 35 U.S.C. 102(b) as being anticipated by Durrett (US 5,964,830). Claim 23 has been canceled and the rejection of claim 23 is now moot.

Applicant respectfully traverses the rejections to the extent considered applicable to the amended claims. The applied references fail to disclose each and every feature of the claimed invention, as required by 35 U.S.C. 102(b), and provides no teaching that would have suggested the desirability of modification to include such features.

Claims 1, 25 and 26

In the rejection of claim 1, the Examiner interpreted microcontroller 224 to be equivalent to a central processing unit as recited in claim 1. The Examiner further cited Stefanky, column 8, lines 25-40 as disclosing that microcontroller 224 runs an operating system. For reference, this portion of Stefanky is reproduced below.

Application Number 09/938,144

Responsive to Final Office Action mailed September 11, 2006

With reference to FIG. 14, a microcontroller 224 and a minimum number of dedicated control support circuits direct all functions of disk drive 18. In the preferred embodiments of the present invention, microcontroller 224 is a three megahertz clock rate Motorola MC68HC11 HCMOS single chip microcontroller, as described in the MC68HC11A8 HCMOS Single Chip Microcomputer Technical Data Book (ADI 1207) available from Motorola, Inc., Motorola Literature Distribution, P.O. Box 20912, Phoenix, Ariz., 85036.

A read-only memory (ROM) 226 is coupled to the microcontroller 224 by way of a general purpose data, address and control bus 240. The ROM 226 is utilized to store a microcontroller control program for supporting five principle tasks necessary to implement the full functionality of the disk drive 18. These tasks include interface, actuator, spin motor, read/write and monitor.

The Examiner failed to explain how the above passage relates to an operating system as recited in claim 1. Applicant notes that the above passage simply illustrates that microcontroller 224, "directs all functions of disk drive 18" apparently through a "microcontroller control program". However, the microcontroller control program in Stefanksy is not equivalent to an operating system. According to the 10th Edition of Merriam-Webster's Online Dictionary¹, accessed December 7, 2006, an operating is "software that controls the operation of a computer and directs the processing of programs (as by assigning storage space in memory and controlling input and output functions)." Stefanksy fails to disclose that microcontroller 224 operates any program other than the microcontroller control program and also fails to disclose that the microcontroller control program directs the processing of other programs. For example, Stefanksy fails to disclose that programs other than the microcontroller control program even exist. In this manner, Stefanksy fails to disclose an operating system and the Examiner's rejection of claim 1 should be withdrawn.

However, in order to further clarify the invention as recited in claim 1, Applicant amended claim 1 to recite the additional feature of wherein the data disc stores an application program run by the operating system. This feature was previously recited in dependent claim 27, which has been cancelled. The Examiner rejected claim 27 under 35 U.S.C. § 103(a) as obvious over Stefanksy in view of Durrett.

¹ <http://www.m-w.com/dictionary/operating%20system>.

Application Number 09/938,144

Responsive to Final Office Action mailed September 11, 2006

In the rejection of claim 27, the Examiner acknowledged that Stefanksy does not disclose that data disc stores application software run by the operating system, but that it would have been obvious to modify to combine the cited references in order to provide stand-alone capability as taught by Durrett. However, Durrett fails to teach how Stefanksy could be modified to run application software stored on rotating disk 44. For example, Stefanksy fails to teach that microcontroller 224 is operable to comprehend data stored on rotating disk 44. Furthermore, it is unlikely that microcontroller 224 would have the processing power necessary to run application software having any degree of complexity beyond that of the microcontroller control program.

The Examiner cited that one of ordinary skill in the art would have been motivated to modify Stefanksy to provide a stand-alone capability. However, Durrett itself provides the means in which to achieve stand alone capability. Specifically, Durrett discloses local computer 10. Notably, local computer 10 itself fails to provide the features of independent claim 1, such as a data disc and a PCB including a CPU mounted to a baseplate. Durrett fails to consider that the function of a disc drive-type device can be expanded beyond that of providing simple data storage. For example, Durrett discloses that local computer 10 does not generally include a physical disk drive, but that one can be added.² This passage illustrates the common understanding of those of ordinary skill in the art at the time of Applicant's invention – devices including data discs are usefully simply to store data. For these reasons, Durrett fails to provide any suggestion of modifying a disk drive disclosed in Stefanksy to have a stand-alone capability.

The combination of Stefanksy and Durrett fails to disclose or suggest a data disc rotatably mounted on a baseplate, a printed circuit board (PCB) fastened to the baseplate having a servo controller and a central processing unit (CPU) mounted to the PCB running an operating system, wherein the data disc stores an application program run by the operating system as recited by claim 1 as amended. Claims 25 and 26 are patentable for at least the reasons claim 1 is patentable as stated herein. Applicant respectfully requests withdrawal of the rejection of claims 1, 25 and 26.

² Durrett, column 1, lines 40-65.

Application Number 09/938,144
Responsive to Final Office Action mailed September 11, 2006

Claims 16 and 17

Applicant has amended independent claim 16 to recite the additional feature of wherein the memory is selected from a group consisting of electronically erasable programmable read-only memory (EEPROM), and flash memory. Support for the amendment to claim 16 may be found at least at page 7, line 16 of the Applicant's specification. In the rejection of claim 16, the Examiner cited system memory unit 24 of Inoue as being equivalent to the memory as recited in claim 16. System memory unit 24 is random access memory (RAM)³ and not EEPROM or flash memory as specified by claim 16 as amended. Furthermore, it would not have been obvious to one of ordinary skill in the art at the time of Applicant's invention to substitute either EEPROM or flash memory for system memory unit 24 as EEPROM and flash memory are functionally different than RAM in that they provide more permanent memory storage capability.

Inoue fails to disclose or suggest each and every feature of claim 16 as amended. Claim 17 is patentable for at least the reasons claim 1 is patentable as stated herein. Applicant respectfully requests withdrawal of the rejection of claims 16 and 17.

Claims 18-20, 22 and 24

The Examiner rejected independent claim 18 separately under Stefanksy and Durrett. Applicant addresses each of these rejections below.

With respect to Durrett, Durrett fails to teach or suggest a case forming a substantially sealed environment that includes a data disc and a central processing unit. Indeed, because Durrett fails to disclose a data disc other than as part of a standard disk drive, Durrett provides no reason for having a case forming a substantially sealed environment that includes a central processing unit. For at least this reason, the Examiner's rejection of claim 18 under 35 U.S.C. 102(b) as being anticipated by Durrett should be withdrawn.

With respect to Stefanksy, Stefanksy fails to disclose a central processing unit as discussed previously with respect to independent claim 1. Stefanksy also fails to disclose wherein the operating system runs application software stored on the data disc as also discussed previously with respect to independent claim 1. For at least this reason, the Examiner's rejection of claim 18 under 35 U.S.C. 102(b) as being anticipated by Stefanksy should be withdrawn.

³ Inoue, column 4, lines 43-51.

Application Number 09/938,144
Responsive to Final Office Action mailed September 11, 2006

Dependent claims 19, 20, 22 and 24 are patentable for at least the reasons claim 18 is patentable as stated herein. Applicant respectfully requests withdrawal of the rejection of claims 18-20, 22 and 24.

Claim Rejection Under 35 U.S.C. § 103

In the Final Office Action, the Examiner rejected claims 2, 20 and 21 under 35 U.S.C. 103(a) as being unpatentable over Stefanksy in view of Glover (US 6,282,045). The Examiner also rejected claims 3-6 under 35 U.S.C. 103(a) as being unpatentable over Stefanksy in view of Glover as applied to claim 2 above, and further in view of Durrett. The Examiner rejected claim 27 under 35 U.S.C. 103(a) as being unpatentable over Stefanksy in view of Durrett. Claim 27 has been canceled and the rejection of claim 27 is now moot.

Claims 2, 20 and 21

Applicant respectfully traverses the rejection of claims 2, 20 and 21 to the extent such rejections may be considered applicable to the claims as amended. The applied references fail to disclose or suggest the inventions defined by Applicant's claims, and provide no teaching that would have suggested the desirability of modification to arrive at the claimed invention.

Claims 2, 20 and 21 are patentable for at least the reasons independent claims 1 and 18 are patentable as stated herein. In light of the obvious differences between independent claims 1 and 18 as amended relative to the applied references, Applicant reserves further comment with respect to claims 2, 20 and 21. Applicant respectfully requests withdrawal of the rejection of claims 2, 20 and 21.

Claims 3-6

Applicant respectfully traverses the rejection of claims 3-6 to the extent such rejections may be considered applicable to the claims as amended. The applied references fail to disclose or suggest the inventions defined by Applicant's claims, and provide no teaching that would have suggested the desirability of modification to arrive at the claimed invention.

Application Number 09/938,144
Responsive to Final Office Action mailed September 11, 2006

DEC 11 2006

Claims 3-6 are patentable for at least the reasons independent claim 1 is patentable as stated herein. Furthermore claims 3-6 contain additional features that would not have been obvious to one of ordinary skill in the art at the time of Applicant's invention.

For example, with respect to claim 5, the Examiner cited Stefanksy as disclosing a three and one half inch form factor. However, because Stefanksy fails to disclose each of the features recited in claim 1, e.g., a CPU running an operating system, Stefanksy fails to teach one of ordinary skill in the art that such combination of features can fit into a package as small as a three and one half inch form factor. In fact, none of the applied references would have made it obvious to one of ordinary skill in the art at the time of Applicant's invention that the combination of features recited in claim 1 could fit into a package as small as a three and one half inch form factor.

The applied references fail to make Applicant's invention as recited in claims 3-6 obvious to one of ordinary skill in the art at the time of Applicant's invention. For at least these reasons, the Examiner has failed to establish a prima facie case for non-patentability of Applicant's claims 3-6 under 35 U.S.C. 103(a). Withdrawal of this rejection is requested.

New Claims

Applicant has added claims 29-31 to the pending application. The applied references fail to disclose or suggest the inventions defined by Applicant's new claims, and provide no teaching that would have suggested the desirability of modification to arrive at the claimed inventions.

No new matter has been added by the new claims. For example, support for claim 30 may be found at least at page 6, lines 8-10 of the Applicant's specification. Support for claim 30 may be found at least at page 7, line 16 of the Applicant's specification. Support for claim 31 may be found at least at page 7, lines 4-7 of the Applicant's specification.

CONCLUSION

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Applicant does not acquiesce with any of the Examiner's current rejections or characterizations of the prior art, and reserves the right to further address such rejections and/or characterizations.

Application Number 09/938,144
Responsive to Final Office Action mailed September 11, 2006

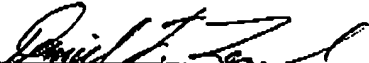
Please charge any additional fees or credit any overpayment to deposit account number 50-1778.

The Examiner is invited to telephone the below-signed attorney to discuss this application.

Date:

DECEMBER 11, 2006
SHUMAKER & SIEFFERT, P.A.
8425 Seasons Parkway, Suite 105
St. Paul, Minnesota 55125
Telephone: 651.735.1100
Facsimile: 651.735.1102

By:


Name: Daniel T. Lund
Reg. No.: 58,614